REMARKS

The examiner has rejected claims 1-56 as being anticipated by Ward et al (US Patent 5,491,495). The Applicant submits that the system disclosed in and claimed by Ward is fundamentally different from the claimed invention.

The Ward system works via the interaction of a stylus and an active, sensing, electronic digitising tablet. When the stylus comes into contact with the tablet, the tablet senses the position of the stylus on the tablet surface in order to receive input from the user. See col. 4, lines 16-24 and col. 7, lines 1-39. In this way, the tablet plays an active role in identifying the position of the stylus.

In contrast, the "*interface surface*" of the claimed invention is a passive surface, which does not contain electronics and which does not sense the presence or absence of the "*sensing device*" on its surface. Instead, the "*interface surface*" of the claimed invention is defined as including "*coded data indicative of a drawing field.*" In order to receive information from a user, the "*sensing device*" senses this "*indicating data indicative of the drawing field*" and sends both "*indicating data*" and "*movement data*" to the computer system. In the claimed invention, therefore, the sensing device is the active device and the interface surface is passive, merely containing the "*coded data indicative of a drawing field.*"

Since Ward does not disclose an interface surface which contains "*information relating to the computer software and including coded data indicative of a drawing field*" (claims 1 and 29) or "*information relating to the computer software and including coded data indicative of an identity of the interface surface*" (claims 9 and 37) the Applicant submits that claims 1, 9, 29 and 37 are not anticipated by Ward. Consequently, dependant claims 2-8, 10-28, 30-36 and 38-56 are also not anticipated by Ward.

The Applicant requests that the Examiner reconsider his objections in light of these arguments.

Claims 9 and 37 have been amended to correct a minor typographical error.

New claims 57 to 126 have been added. These claims mirror the claims accepted by the International Examining Authority in the PCT application corresponding to the present application, except that multiple dependencies have been removed from this set of claims. The Applicant submits that these claims introduce no new matter.

CONCLUSION

It is respectfully submitted that all of the Examiner's objections have been successfully traversed. Accordingly, it is submitted that the application is now in condition for allowance. Reconsideration and allowance of the application is courteously solicited.

Very respectfully,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims

Claims 9 and 37 have been amended as follows:

9. (Amended) A method of enabling user interaction with computer software running in a computer system via:

an interface surface containing information relating to the computer software and including coded data indicative of an identity of the interface surface; and

a sensing device which, when placed in an operative position relative to the interface surface, senses indicating data indicative of the identity of the interface surface and generates movement data indicative of the sensing device's movement relative to the interface surface;

the method including the steps of, in the computer system:

(a) receiving the indicating data from the sensing device;

(b) receiving the movement data from the sensing device;

(c) performing written gesture recognition in relation to at least some of the movement data; and

(d) in the event that a written gesture is recognised, operating the computer system in accordance with instructions associated with the written gesture and the interface surface.

37. (Amended) A system of enabling user interaction with computer software running in a computer system via:

an interface surface containing information relating to the computer software and including coded data indicative of an identity of the interface surface; and

a sensing device which, when placed in an operative position relative to the interface surface, senses indicating data indicative of the identity of the interface surface and generates movement data indicative of the sensing device's movement relative to the interface surface;

the computer system being configured to:

(a) receive the indicating data from the sensing device;

(b) receive the movement data from the sensing device;

(c) perform written gesture recognition in relation to at least some of the movement data; and

(d) in the event that a written gesture is recognised, operate the computer software in accordance with instructions associated with the written gesture and the interface surface.

New claims 57 to 126 have been added as follows:

57. (New) A method to enable a user to interact with computer software running in a computer system utilizing a form printed onto a surface, the form including information relating to the computer software, the surface having coded data indicative of a drawing field relating to the computer software, the method including the steps of:

providing the form to the user;

receiving, in the computer system, indicating data and movement data from a sensing device, the indicating data indicative of the drawing field, the movement data indicative of movement of the sensing device relative to the form, the sensing device, when placed operatively relative to the drawing field, generating the indicating data based at least partially on sensing at least some of the coded data and substantially simultaneously generating the movement data; and

identifying, in the computer system and from the indicating data, the drawing field, and

operating the computer software at least partially in reliance on the movement data and on instructions association with the drawing field.

58. (New) The method of claim 57, which includes printing the form in response to receiving, in the computer system, a request for the form.

59. (New) The method of claim 57, which includes causing the form and the coded data to be printed onto the surface substantially simultaneously.

60. (New) The method of claim 57 further including, in the computer system, associating the movement data with the drawing field.

61. (New) The method of claim 57, including the step of performing written gesture recognition on at least some of the movement data.

62. (New) The method of claim 57 further including the step of, in the computer system, recognizing whether the movement data is indicative of a written gesture drawn on

the surface by the user.

63. (New) The method of claim 61 wherein, in the event that the written gesture is recognized, operating the computer system in accordance with instructions associated with the written gesture.

64. (New) The method of claim 62 wherein the written gesture includes a selection gesture.

65. (New) The method of claim 61 wherein the selection gesture includes circumscribing or underlining at least some of the information.

66. (New) The method of claim 57, including the step of identifying the user.

67. (New) The method of claim 66, wherein the step of identifying the user includes using the movement data.

68. (New) The method of claim 66, further including the step of receiving, in the computer system, data indicative of an identity of the user.

69. (New) The method of claim 57, further including the step of receiving, in the computer system, data from a memory of the sensing device, the data being indicative of an identity of the user.

70. (New) The method of claim 57, including the step of sending, in the computer system, data to the computer software indicative of at least the drawing field.

71. (New) The method of claim 57, wherein the drawing field is associated with a visible drawing zone defined on the surface.

72. (New) The method of claim 57, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used on the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used on the surface.

73. (New) The method of claim 57, further including the step of generating movement data in the form of a locus of the sensing device in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

74. (New) The method of claim 73, wherein the relative displacement is obtained by doubly integrating the acceleration with respect to time.

75. (New) The method of claim 72, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of

acceleration.

76. (New) The method of claim 57, wherein elements are disposed on the surface, the sensing device being configured to periodically sense the elements as it is used on the surface, the method including the step of generating the movement data by ascertaining relative displacement of the sensing means over time with respect to at least one of the elements.

77. (New)The method of claim 76, wherein the elements are disposed on the surface as a regular array of dots, lines or other formations.

78. (New) The method of claim 76, wherein the elements are disposed on the surface stochastically.

79. (New) The method according to claim 76, wherein the coded data includes the elements.

80. (New) The method of claim 57, wherein the movement data is generated by ascertaining relative rotation of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used thereon.

81. (New) The method of claim 80 wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

82. (New) The method of claim 81, wherein components of rotation of the rollerball, due to movement of the sensing device on the surface, are periodically measured.

83. (New) The method of claim 82, wherein the components of rotation of the rollerball due to movement of the sensing device on the surface are measured by means of:

rollers disposed within the constraining housing for roation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

84. (New) The method of claim 57, wherein the coded data is indicative of a plurality of positions, in or associated with the drawing field.

85. (New) The method of claim 57, wherein the coded data includes a plurality of tags, each of which includes tag data.

86. (New) The method of claim 85, including deriving the relative position of at least one tag using at least some of the at least one tag's tag data.

87. (New) The method of claim 86, wherein the relative position is defined in relation to one of the group comprising: a plurality of other tags, the surface, the drawing field and a zone associated with the drawing field.

88. (New) The method of claim 85, including deriving an identity of the drawing field using at least some of the tag data of at least one tag.

89. (New) The method of claim 88, wherein the data from which the identity of the drawing field is derived is the same in all tags of the same drawing field.

90. (New) A system for enabling a user to interact with computer software running in a computer system utilizing a form printed onto a surface, the form including information relating to the computer software, the surface having coded data indicative of a drawing field relating to the computer software, the system including:

a computer system which:

receives indicating data and movement data from a sensing device, the indicating data indicative of a drawing field relating to the computer software and the movement data indicative of movement of the sensing device relative to the form, the sensing device, when placed operatively relative to the drawing field, generating the indicating data based at least partially on sensing at least some of the coded data and substantially simultaneously generating the movement data;

identifies, from the indicating data, the drawing field, and

operates the computer software at least partially based on reliance on the movement data and instructions associated with the drawing field.

91. (New) The system of claim 90 including a printer for printing the form in response to receiving, in the computer system, a request for the form.

92. (New) The system of claim 90 including a printer for printing the form and in which the printer prints the coded data at substantially the same time as the form.

93. The system of claim 90 wherein the computer system is configured to associate the movement data with the drawing field.

94. (New) The system of claim 90, wherein the computer system is configured to perform written gesture recognition on at least some of the movement data.

95. (New) The system of claim 90 wherein the computer system is configured to recognize whether the movement data is indicative of a written gesture drawn on the surface

by the user.

96. (New) The system of claim 94 wherein the computer system is configured, in the event that the written gesture is recognized, to operate the computer software in accordance with instructions associated with the written gesture.

97. (New) The system of claim 95 wherein the written gesture includes a selection gesture.

98. (New) The system of claim 97 wherein the selection gesture includes circumscribing or underlining at least some of the information.

99. (New) The system of claim 90, wherein the computer system is configured to identify the user.

100. (New) The system of claim 99, wherein the computer system is configured to identify the user by using the movement data.

101. (New) The system of claim 99, wherein the computer system is configured to receive data indicative of an identity of the user.

102. (New) The system of claim 90, wherein the computer system is configured to receive identity data from a memory of the sensing device, the identity data being indicative of an identity of the user.

103. (New) The system of claim 90, wherein the computer system is configured to send data to the computer software indicative of at least the drawing field.

104. (New) The system of claim 90, wherein the drawing field is associated with a visible drawing zone defined on the surface.

105. (New) The system of claim 90 which includes the sensing device.

106. (New) The system of claim 105, wherein the sensing device includes at least one acceleration measuring device for measuring acceleration of the sensing device as it is used on the surface, the movement data being generated by periodically sampling the acceleration of the sensing device as it is used on the surface.

107. (New) The system of claim 105, wherein the sensing device generates movement data in the form of a locus of the sensing means in relation to the surface, the locus being determined by ascertaining relative displacement of the sensing device.

108. (New) The system of claim 107, wherein the relative displacement is obtained by doubly integrating acceleration with respect to time.

109. (New) The system of claim 106, wherein the acceleration measuring device includes one or more accelerometers configured to measure at least two orthogonal components of acceleration.

110. (New) The system of claim 105, wherein elements are disposed on the surface, the sensing device being configured to periodically sense elements as it is used on the surface, the movement data being generated by ascertaining relative displacement of the sensing means over time with respect to at least one of the elements.

111. (New) The system of claim 110, wherein the elements are disposed on the surface as a regular array of dots, lines or other formations.

112. (New) The system of claim 110, wherein the elements are disposed on the surface stochastically.

113. (New) The system of claim 110 wherein the coded data includes the elements.

114. (New) The system of claim 105, wherein the movement data is generated by ascertaining relative movement of one or more motion sensing elements rotatably mounted to the sensing device for contact with the surface while the sensing device is used thereon.

115. (New) The system of claim 114, wherein the motion sensing elements include one or more rollerballs mounted for rotation within a constraining housing disposed substantially within the sensing device.

116. (New) The system of claim 115, wherein components of rotation of the rollerball, due to movement of the sensing device when used on the surface, are periodically measured.

117. (New) The system of claim 116, wherein the components of rotation of the rollerball due to movement of the sensing device by the user when used on the surface are measured by means of:

rollers disposed within the constraining housing for rotation, the rollers being configured to be driven by contact with the rotating rollerball; or

optical sensing of rotation of the rollerball with respect to the constraining housing.

118. (New) The system of claim 90, wherein the coded data is indicative of a plurality of positions in or associated with drawing field.

119. (New) The system of claim 90, wherein the coded data includes a plurality of tags, each of which includes tag data.

120. (New) The system of claim 119, wherein the computer system is configured to

derive the relative position of at least one tag using at least some of the tag data of the at least one tag.

121. (New) The system of claim 120, wherein the relative position is defined in relation to one of the following group: a plurality of other tags, the surface, the drawing field, and a zone associated with the drawing field.

122. (New) The system of claim 118, where the computer system is configured to derive an identity of the drawing field using at least some of the tag data of at least one tag.

123. (New) The system of claim 122, wherein the data from which the identity of the drawing field is derived is the same in all the tags of the same drawing field.

124. (New) The system of claim 105 wherein the sensing device includes a marking nib.

125. (New) The system of claim 105 wherein the sensing device contains identity information which imparts a unique identity to the sensing device.

126. (New) The system of claim 125 when dependent on claim 102, wherein the identity data includes the identity of the sensing device.